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The imaging and control system 110 enables the user to record, view and analyze intracardiac electrogram and EKG signals, as well as to view a real-time graphic representation of the catheters being used, as discussed above. Operation of the Cardiac Pathways Arrhythmia Mapping System is described in more detail in U.S. Patent No. 6,216,027 B1, assigned to the assignee of the present invention and incorporated by reference herein. The imaging and control system 110 comprises an RF generator, a computer or other processing device, and memory or other storage device. Alternatively, the processing device and the storage device can be one or more separate units. As discussed above and in U.S. Patent No. 6,216,027 B1, the imaging and control system 110 receives signals from a plurality of ultrasound transducers carried by reference catheters (not shown) located within the interior lumen or on the catheter body 30. A connector 120 electrically couples the catheter 20 and its components to the control and imaging system 110. Real time cross-sectional images of a patient's vasculature are generated and displayed on one or more visual displays 112 of the control and imaging system 110, based on signals received from the transducers and processed by the processing device. The transducers may also be used to locate the catheter 20 within a patient's body and display the location of the catheter 20 as an image on the visual display 112. A physician can thereby determine the position of the distal portion 90 and the electrodes 100 relative to the cardiac tissue in real time on the imaging and control system 110. This information can be stored in the memory so that the physician can reposition the distal portion 90 of the catheter 20 at the stored location at a later time.